TECHNOLOGY IN CORRECTIONAL EDUCATION

AN IMPLEMENTATION CASE STUDY

BY PAUL LEWIN – AZTEC SOFTWARE
RETIRED IT LIAISON FOR THE COLORADO DEPARTMENT OF CORRECTIONS | MITCH ROSIN - AZTEC SOFTWARE
NATIONAL CONSULTANT

TABLE OF CONTENTS

ABOUT THE AUTHORS

PAUL LEWIN

Paul Lewin was the IT liaison for the Colorado Department of Corrections – Division of Education from 12/2011 to 6/2018. During that time, his responsibilities included the design and implementation of a state-wide, computer-based testing system for Pearson VUE to deliver the GED Tests. Under his direction, computer labs consisting of 15 computers each were implemented at all 23 correctional locations throughout the Colorado Department of Corrections.

MITCH ROSIN

Mitch Rosin has worked in workforce/education/labor field for more than 30 years. After careers as a social worker and classroom teacher, he managed operations for two divisions of McGraw-Hill Education in the United States and lead Adult Education/Workforce/Training initiatives globally. Currently, he consultants for several companies both in the United States and internationally including Aztec Software, CASAS, and several Adult Education Consortia in California. Mr. Rosin holds a Master of Arts in Education, a Master of Science in Curriculum Design and Development, and a Master of Science in International Public Policy.

INTRODUCTION

The use of technology in correctional education settings has long been controversial. "The policies and practices of federal, state, and local corrections agencies, including the juvenile justice system, severely hinder the ability of correctional education programs to enable learning through technology."[1] Security drives the concerns with access to the internet instilling fear in legislators, corrections officials, and victims of crimes. Layered upon security issues is the cost of both hardware and software; which often includes ongoing maintenance expenditures. Lastly, policymakers often question the efficacy of use of technology in the delivery of training and education programs to those who are incarcerated.

Given the permeation of technology into our everyday lives, however, it is becoming increasingly difficult to discuss the rehabilitation and reentry of incarcerated individuals without also including training in the use of technology. Job applications, community services, and most other aspects of daily life are all woven into the use of technology, and often cannot be accessed in any other manner. By failing to delivery instruction in information technology, correctional institutions may be doing a greater disservice to those facing the challenges of reentry. Implementing a technology policy also supports the continuum of learning that is often needed by incarcerated individuals.

A recent study on recidivism found that "inmates who participated in correctional education programs were 43 percent less likely to return to prison than those who did not enroll."[2]

From literacy and numeracy instruction to high school diploma completion and specific job training, technology allows for data collection, performance monitoring, and the individualization of curriculum that better meets the needs of learners. Additionally, much of the legal advice researched behind prison and jail walls is now only available through online legal libraries.

Education services for those who are incarcerated became every more important with the December 2018 First Step Act. This law "will usher in significant changes to federal sentencing laws as well as improvements to programs that aim to reduce recidivism and provide support to people who are involved in the criminal justice system."[3] Among the many benefits of the First Step Act, the legislation will allow for the "creation and expansion of life-changing classes by authorizing $250 million over five years to the BOP for the development and expansion of programming focused on skill-building, education and vocational training. These classes will help prepare individuals for a successful and lasting transition back into their communities. The bill also allows partnerships between nonprofits, volunteers, faith groups and other organizations to ensure that classes are accessible to as many people as possible."[4]

"Of all factors that impact the success or failure of reentering society post incarceration . . . employability skills are paramount."[5]

Adopting and implementing technology has been shown to produce many positive outcomes. First and foremost is the ability for people reentering society to be fully capable of participating in the global economy. Obtaining a high school diploma, receiving job training, and applying for a job all require some level of technological awareness. Since 2014, the GED Tests and the National External Diploma Program have only been offered online, and while the HiSET and TASC high school equivalency assessments are offered in either online or paper-pencil formats, the need to have a working knowledge of technology remains required for almost all jobs.

[1] Educational Technology in Corrections, 2015. U.S. Department of Education
[2] Davis, et.al. 2014
[3] Accessed December 28, 2018 https://csgjusticecenter.org/jc/president-trump-signs-first-step-act-into-law-reauthorizing-second-chance-act/
[4] www.firststepact.org/about Accessed December 29, 2018
[5] http://npjs.org/jajjs/wp-content/uploads/2015/02/Easing-Reentry-VanderPyl-Final.pdf Accessed December 15, 2018

COLORADO DEPARTMENT OF CORRECTIONS, DIVISION OF EDUCATION

Given the information available about the benefits of technology in correctional education settings, the Colorado Department of Corrections, Division of Education, began to explore the implementation of computer labs. The project began January 2013 and all computer labs were implemented by September 2013. The first computer-based GED Tests were administered in January 2014 which was the deadline for computer-based testing mandated by GED Testing Service. All 23 computers labs consisted of 15 computers each, and were used to conduct GED testing.

Although the labs were effective for computer-based testing, it became apparent that the computers were sitting unused for days between testing sessions. The instructors at the facilities began inquiring if the computer labs could be utilized for computer-based instruction between testing. Because the testing computers were connected to the Internet, it was determined that Internet-based computer instruction could be possible.

A team at the CDC began to explore implementing an Internet-based computer instruction model. It was quickly determined that such a model would be beneficial for many reasons. First, being web-based, instructional programs could run on any web browser. Second, since the servers would be in the cloud, there was no need for on-site servers. This additionally reduced the need for ongoing server maintenance, and site support. Third, being cloud-based, any curriculum updates that reflected changes in online assessments would be automatic, thereby providing the most up-to-date curriculum and applications. Fourth, instructor-level management of users, content, usage, reporting, and layout were seamless. Lastly, professional development support and vendor training could be delivered online, and at the point of need, rather than sending instructional staff to off-site locations. Clearly these benefits would be a great advantage to computer-based instruction in a correctional educational system.

"Time during incarceration should be used for rehabilitation, education, and personal growth."[6]

However, the CDC team also identified some disadvantages. One key issue was the fear, uncertainty and doubt that existed among correctional and IT management about introducing the internet to inmates. Offenders would have to have internet access for the project to be successful. Second, the potential for lax IT security by educational vendors could introduce safety concerns. This was compounded by potential changes (both known and unknown) by online vendors could cause usability and/or security issues. Third, bandwidth needed to be monitored and supervised to ensure a failure did not occur during the administration of an online assessment. Fourth, known and unknown external links, outside the original online application, could be introduced, without CDC approval. The IT department would need to ensure only proper access to the approved online application through the implementation of firewalls and other security measures.

"A correctional setting creates significant barriers that educators, incarcerated students, and program partners must accommodate to provide an effective teaching and learning environment. These barriers are even more apparent with the introduction of advanced technologies."[7]

Additionally, instructional and IT staff would need to monitor offender usage, all within the parameters of the security protocols. Fifth was the outstanding question if vendors would

[6] http://npjs.org/jajjs/wp-content/uploads/2015/02/Easing-Reentry-VanderPyl-Final.pdf Accessed December 15, 2018
[7] Educational Technology in Corrections, 2015. U.S. Department of Education

be willing to work with the CDC to create specific, correctional-based applications of their existing online offerings. Lastly, processes and procedures would need to be developed to mitigate all security violations with vendors and within the correctional system.

To mitigate and/or manage the disadvantages, the CDC team started evaluating web-based applications that met the criteria of securely working in a correctional education system while at the same time were effective at producing student success. The following 12 criteria was used to select a web-based, instructional learning application:

1. No (or few) external links. The application needed to stay within its own web domain and not link offenders to the full internet.
2. A vendor that could provide a custom domain for the corrections system. This added greatly to the firewall security.
3. A vendor with a willingness to work in a secure correctional environment. Not every company that provides instructional material online is willing to meet the very specific needs of the corrections environment.
4. Vendor assurances that changes to the application would be disclosed before implementation. While being sensitive to intellectual property and proprietary content, the CDC needed to identify a vendor who would be willing and able to share updates.
5. The ability to audit and access user data and logs. The correctional system needed to have 24/7 access to user data.
6. Easy manageability of users, content, usage, reporting and layout by the lowest level of staff member. Data needed to be accessible and useable by all levels of the instructional and IT departments.
7. Department-wide reporting of student progress and achievements.
8. Rich content. Recognizing that each learner is different, embedded videos, audio support, on-screen interactivity and rewards for success needed to be part of the learning platform.
9. Multimedia content that is optimized for open source web browsers and does not contain Adobe Flash or other proprietary add-ons.
10. No pop-up windows and a web design that utilized modern website construction.
11. Ability to export all user data at end of contract.
12. Meets state and federal privacy laws and guidelines.

VENDOR IDENTIFICATION

The first application researched was Aztec Software. However, even before the GED instructors could evaluate the instructional content, the application had to be vetted and approved by the IT department. Many, many hours of research and testing were applied to the application. It was determined by the IT department that Aztec Software would meet the criteria of securely and successfully working in all correctional facilities.

A committee of correctional educators was then established to determine if Aztec Software would be effective for student success in a correctional system. The content was evaluated, videos and audio reviewed, and alignment to the GED Tests evaluated. It was determined by the instructional team that Aztec Software successfully met all the requirements set forth by the CDC management team.

It was proposed to the Colorado Department of Corrections executive management that a web-based educational solution was found that would achieve student success and more effectively utilize the computers in the labs. After many meetings and research to determine safety, usability and security, DOC executives approved a pilot project of five computer labs.

INTERNET-BASED INSTRUCTIONAL PILOT

In September 2014, Aztec Software was purchased and implemented in five computer labs. Aztec Software turned out to be very successful and secure, popular with the students and GED instructors, and produced solid performance outcomes. The pass rate among inmates on the GED Tests was greatly increased almost immediately.

But a problem of success was created. Inmates were limited in the time they could access the computer labs and the learning platform. Additionally, very limited capacity (15 computers per site) limited how many inmates could use the system at any given time. GED instructors and students became frustrated. The software application was not able to be fully utilized due to time and access constraints. Additionally, GED instructors and students did not like spending time outside of their classrooms.

Due to the success of Aztec Software's continuum of learning courses, it was determined to expand usage of Aztec Software to all 23 correctional facilities and add computers to each GED classroom. Analysis was completed to determine how to add and manage computers in GED classrooms.

"". . . RAND researchers strongly suggested that educational technology is being underused in correctional settings and that it holds considerable promise to enhance and expand correctional education within constrained resources."[8]

As the implementation continued to expand, the IT and instructional teams encountered obstacles that needed to be addressed and overcome. First and foremost, standalone PCs were large, cumbersome and difficult to use on existing student classroom desks. They simply took up too much space. Also, electrical and/or computer network cabling was difficult to feed directly to student desks that were never intended as computer stations. Also, the computers would not always be utilized for classroom instruction and would be in the way should the instructor want to lead group work or individual, print-based instruction. Students also liked to "play" with the equipment, and were often distracted from the instructional lessons. Additionally, standalone PCs are difficult to secure in a correctional environment, and a complete wired network would need to be created for each individual classroom. These issues were only realized once the pilot was fully implemented. These numerous disadvantages, along with many more, effectively ruined any chances of adding standalone PCs to correctional educational classrooms.

[8] Educational Technology in Corrections, 2015. U.S. Department of Education

CHROMEBOOK IMPLEMENTATION

Determined to find solutions, the IT team decided to start researching how Colorado public schools utilized classroom computers in a K-12 environment. It was determined that many Colorado K-12 public school systems had implemented Google Chromebooks. The Google Chromebooks appeared to have none of the disadvantages of the PC standalone computers in a classroom.

The next step was to determine if Google Chromebooks could be successfully and securely implemented in a correctional educational system. After researching various correctional systems throughout the United States, only one at the time, Oregon Division of Youth Corrections, was found to have implemented Google Chromebooks in a correctional educational system. The Oregon Division of Youth Corrections indicated that their Chromebook implementation was very successful and secure. They suggested the CDC to contact Google for additional expertise and implementation guidance.

Google immediately began working with Colorado Department of Corrections management and IT staff to determine the security model. The following eight criteria was created jointly for implementation of a Chromebook classroom:

1. Chromebooks would need to securely connect to a wireless system controlled and managed by the Corrections IT department.
2. Chromebooks would need to be a laptop style with a touch-screen and keyboard.
3. Management of all physical items of the Chromebook such as camera, ports and microphone would need to be managed by correctional/IT staff.
4. Chromebooks would need to be portable and not obtrusive in a classroom setting.
5. Chromebooks would need a battery that would last for the time of instruction.
6. Chromebooks would be stored and charged in a secure cart.
7. The Chromebook web browser would need to work with modern web standards to successfully deliver educational programs to students.
8. Chromebook's ecosystem would need monitoring and auditing tools for security.

It was determined by Google that a successful and secure Chromebook ecosystem could be implemented within the Colorado Department of Corrections. Because of this determination, CDC executive management granted approval for a Chromebook pilot project in five correctional facilities. Wireless networks were installed in the GED classroom areas of the five correctional facilities. A total of 200 Chromebooks was distributed across the GED classrooms, all with access to the Aztec Learning System.

"". . . incarcerated individuals who received general education and vocational training were significantly less likely to return to prison after release and more likely to find employment than their peers who not did not receive such opportunities."[9]

[9] Educational Technology in Corrections, 2015. U.S. Department of Education

OUTCOME AND PROGRAM EXPANSION

The CDC pilot was deemed a success within three months. No security issues were found with the wireless network, Chromebook or the Aztec Learning System. CDC executive management granted approval for full implementation at all 23 correctional facilities.

During 2017 and the first half of 2018, wireless networks were installed within the education areas of all 23 correctional facilities across Colorado. Approximately 1,700 Chromebooks were delivered and implemented in more than 115 classrooms. Additionally, 300 staff Chromebooks were delivered and utilized by instructors. Instructors can take their Chromebooks home each evening, as well as utilize within the classroom setting.

Applications were expanded on the Chromebooks, and there are currently more than one-dozen educational applications covering GED subject areas as well as vocational courses being offered. An additional 1,500 Chromebooks are proposed to be purchased to fully equip the remaining classrooms and meet the growing need of Colorado correctional education. A pilot project for prison libraries utilizing Chromebooks will be commencing in 2019. It is planned that patrons of the library will be able to take library Chromebooks to their living units. Additionally, a pilot program has begun to utilize Chromebooks for re-entry.

CONCLUSION

As the nation moves toward the implementation of the First Step Act, it is critical for all corrections professionals to recognize the importance of technology-based instruction for those serving time and especially for those preparing for reentry. As the global economy moves toward an increasingly technology-savvy workforce, "employers are increasingly looking for potential employees who not only possess digital literacy skills but those who can nimbly apply those skills as they take on tasks requiring problem solving in the workplace."[10] If this is the case for individuals who have never been incarcerated, then we owe it to those who have to provide the highest level of educational instruction and training to help balance the employability opportunities upon reentry.

The Colorado Department of Corrections, Education Division, has proven that Chromebooks can be securely and successfully implemented in a correctional educational environment. The project has been instrumental to student success and has given instructors excellent state of the art instructional tools. The Chromebook project continues to have no reported security issues.

[10] www.coabe.org/journal/ Accessed December 2, 2018

AZTEC
SOFTWARE

EDUCATE • EMPOWER • ELEVATE

51 Commerce Street, Springfield Township, NJ 07081
Tel: 800.273.0033 *www.AztecSoftware.com*